

## **REMARKS**

Upon entry of the present amendment, claims 1, 2, 10-13, 16-17, 40, and 55-56, and 58-59 are pending. Claims 56, 58 and 59 have been allowed. Claims 18, 41 and 57 were canceled in this amendment without prejudice or disclaimer. Claim 40 was amended to make it depend from amended claim 1.

Claim 18 was subject to a written description rejection due to a typographical error in the specified molecular weight range. The typographical error was corrected; recitation of the corrected molecular weight range is supported by the disclosure at least at page 4, lines 10-12. Claim 18 was not subject to any other rejections. Thus, to put the claims into condition for allowance, dependent claim 18 was canceled and all of its limitations were incorporated into independent claim 1.

No new matter has been added by this amendment.

### **I. Objections to the Specification**

The Examiner has objected to Tables 1 and 2 because the sequence identifiers appear at the end of the Table. As suggested by the Examiner, these tables have been amended to include the sequence identifiers at the top of each table, next to the title. Accordingly, Applicant believes that the grounds for this objection have been obviated, and this objection should be withdrawn.

### **II. Claim Rejections Under 35 U.S.C. § 101**

Claims 1, 2, 10-13, 16, 17 and 55 have been rejected under 35 U.S.C. §101. According to the Examiner, the claimed invention is directed to non-statutory subject matter, because the term “tribonectin” reads on the natural, non-patentable, state of tribonectins.

As suggested by the Examiner, independent claim 1 has been amended to recite an isolated tribonectin. Thus, claim 1 and its dependent claims (including claims 2, 10-13, 16, 17 and 55) are directed to tribonectins removed from the natural environment. Accordingly, the Examiner should withdraw this rejection.

### **III. Claim Rejections Under 35 U.S.C. § 112, First Paragraph**

Claim 18 was rejected under 35 U.S.C. §112, first paragraph for lack of written description. In particular, the Examiner pointed out that “the specification fails to provide a description of a tribonectin with a molecular weight in the range of 200-280 kDa [and the] function of the claimed tribonectin having a molecular weight in the range of 200 to 280 kDa is not described.” (Office Action, page 3).

The typographical error pertaining to the molecular weight range in claim 18 has now been corrected to recite the range disclosed in the specification. Claim 18 has been canceled, and claim 1 amended to incorporate the limitations of claim 18, *i.e.*, to recite an isolated tribonectin having a molecular weight in the range of 220-280 kDa. As acknowledged by the Examiner, the specification describes a tribonectin having a weight in the range of 220-280 kDa. (*See e.g.*, specification at page 4, lines 10-12). Accordingly, Applicant believes that amended independent claim 1 (previously dependent claim 18) is fully described by the as-filed specification, and this rejection should be withdrawn.

### **IV. Claim Rejections Under 35 U.S.C. § 112, Second Paragraph**

Claims 11 and 12 remain rejected under 35 U.S.C. §112, second paragraph as indefinite. The Examiner has asserted that claims 11 and 12 are indefinite as “it is not clear from the claim nor the specification what polypeptide residue(s) are responsible for ‘reducing the coefficient of friction’ or whether it is the ‘O-linked oligosaccharide moiety’ (which is not a peptide).” (Office Action, page 4).

Claims 11 and 12 have been amended. Amended claim 11 recites an isolated tribonectin having an O-linked oligosaccharide moiety, wherein the O-linked oligosaccharide moiety reduces the coefficient of friction between bearing surfaces *in vitro*. Amended claim 12 is directed to an isolated tribonectin having an O-linked oligosaccharide moiety, wherein the O-linked oligosaccharide moiety reduces the coefficient of friction between bearing surfaces *in vivo*.

As described throughout the specification (*e.g.*, at page 1, lines 28-29), the tribonectins of the claimed invention include at least one O-linked lubricating moiety. In other words, the O-linked moiety imparts the lubricating properties on the tribonectins. Amended claims 11 and 12

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recite tribonectins that have an O-linked oligosaccharide moiety, such that the O-linked moiety reduces the coefficient of friction between bearing surfaces. Accordingly, Applicant believes these amended claims are clear and definite, and this rejection should be withdrawn.

**V. Claim Rejections Under 35 U.S.C. § 103**

Claims 1, 10, 40, 41 and 57 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Flannery *et al.*, Biochem. and Biophys. Res. Comm., vol 254:535-41 (1999) (“Flannery”) in combination with International Publication No. WO 92/13075 by Turner *et al.* (“Turner”). Claims 41 and 57 have been canceled. The limitations of claim 18 (which was not subject to this rejection) were incorporated into independent claim 1, from which amended claim 40 now depends. Thus, claims 1, 10, and 40 all require the limitations of originally-filed dependent claim 18, *i.e.*, a tribonectin with a molecular weight in the range of 220-280 kDa. Given that neither Flannery nor Turner describe or suggest the required molecular weight range, Applicant submits that the amended claims are distinguished over the cited art and respectfully requests withdrawal of this rejection.

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## CONCLUSION

Applicant submits that the application is in condition for allowance and such action is respectfully requested. Should any questions or issues arise concerning the application, the Examiner is encouraged to contact the undersigned at the telephone number provided below.

Respectfully submitted,

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